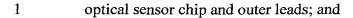


- 2 1. An optical device with a tape carrier package comprising:
- an optical sensor chip forming a plurality of electrodes on its sensible surface;
- 4 a flexible circuit board having an upside surface, an underside surface and a window,
- 5 wherein the underside surface around the window is adhered to the perimeter of the
- 6 sensible surface of the optical sensor chip;
- a plurality of metal circuits formed on the flexible circuit board and having inner leads
- 8 extending to the window for bonding with the corresponding electrodes of the optical
- 9 sensor chip and outer leads; and
- a base having a recession to accommodate the optical sensor chip being located under
- the underside surface of the flexible circuit board and being corresponding to the
- 12 window.
- 13 2. The optical device with a tape carrier package of claim 1, wherein the base has a
- surrounding dam which extends onto the upside surface of the flexible circuit board.
- 15 3. The optical device with a tape carrier package of claim 2, further comprising a
- transparent cover fixedly attached to the surrounding dam of the base.
- 4. The optical device with a tape carrier package of claim 1, wherein the flexible circuit
- board further forms a plurality of openings around the window.
- 19 5. The optical device with a tape carrier package of claim 1, wherein the outer leads of
- 20 the metal circuits extends in a same direction.
- 21 6. An optical device with a tape package comprising:
- an optical sensor chip forming a plurality of electrodes on its sensible surface;
- a flexible circuit board having an upside surface, an underside surface and a window,
- 24 wherein the underside surface around the window is adhered to the perimeter of the
- 25 sensible surface of the optical sensor chip;
- a plurality of metal circuits formed on the flexible circuit board and having inner leads
- extending to the window for bonding with the corresponding electrodes of the



- a thermosetting filler at least formed at the connection perimeter of the optical sensor
- 3 chip and the underside surface of the flexible circuit board.
- 4 7. The optical device with a tape carrier package of claim 6, further comprising a
- 5 transparent cover on the upside surface of the flexible circuit board.
- 8. The optical device with a tape carrier package of claim 6, further comprising a
- 7 transparent gel filling on the sensible surface of the optical sensor chip.
- 8 9. The optical device with a tape carrier package of claim 6, wherein the flexible circuit
- 9 board further forms a plurality of openings around the window.
- 10 10. The optical device with a tape carrier package of claim 9, wherein the thermosetting
- filler is partially formed on the upside surface of the flexible circuit board through the
- 12 openings.
- 13 11. The optical device with a tape carrier package of claim 6, wherein the outer leads of
- the metal circuits extends in a same direction.
- 15 12. The optical device with a tape carrier package of claim 6, wherein the thermosetting
- filler is a base for carrying the optical sensor chip.
- 17 13. A tape carrier packaging method for the optical device comprising:
- providing a tape having an upside surface, an underside surface and a plurality of
- windows, wherein a plurality of metal circuits are formed on the upside surface and
- 20 have the inner leads extending to the windows;
- 21 providing at least an optical sensor chip having a plurality of electrodes being formed
- on the sensible surface of each optical sensor chip;
- thermal compressing the inner leads of the metal circuits in the window for bonding
- with the electrodes of the optical sensor chip; and
- forming a thermosetting filler to seal the connection perimeter of the optical sensor
- chip and the flexible circuit board.
- 27 14. The tape carrier packaging method for the optical device of claim 13, wherein in the

1	step of forming a thermosetting filler, by molding and injection the formed base has a
2	recession accommodating the optical sensor chip, located under the underside surface
3	of the flexible circuit board and being corresponding to the window, and a surrounding
4	dam which extends onto the upside surface of the tape.
5	15. The tape carrier packaging method for the optical device of claim 14, further
6	comprising a step:
7	fixedly attaching a transparent cover to the surrounding dam of the base.
8	16. The tape carrier packaging method for the optical device of claim 13, wherein a
9	plurality of openings are formed around each window.
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